2010 Military Health System Conference

CDM, Measures you can use.

Sharing Knowledge: Achieving Breakthrough Performance Mrs. Cheryl Ann Lateulere Kraft Jan 12, 2010







NAVAL MEDICAL CENTER PORTSMOUTH

What is the Clinical Data Mart



- CDM is the clinical reporting tool for AHLTA and provides ad hoc reports, structured query and analysis capabilities
- CDM measures, analyzes and manages performance of direct patient care, wellness, prevention and disease management.
- CDM reports AHLTA demographic, symptomatic, and diagnostic data

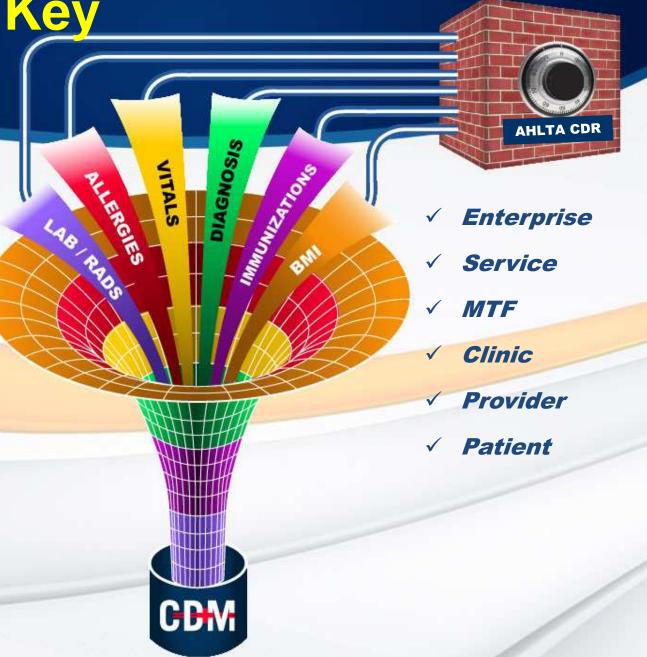
Conceptual Access Path



- Provide reporting access to specific clinical data from the AHLTA Clinical Data Repository (CDR)
- CDM imports raw data from CDR
 - Including access to AHLTA free text data
- Data is refreshed approximately every 48 hours

CDM is the Key

- √ Enterprise-wide Data
- ✓ CDR Data Feed
- √ Scalable
- ✓ Market Leading Business Intelligence Toolset
- √ Robust Security



CDM - the KEY business tool



- Business intelligence dashboard is no different than the dashboard in your car.
 - It keeps you informed of your car's performance and alerts (read: business') you when you're running out of gas (read: money).
 - In order to truly benefit your business, a great dashboard needs to be designed to meet four important criteria, tell us what you NEED.
 - Canned reports are being built.

CDM - the KEY business tool



- Dashboard Metrics are only as good and reliable as the data they're drawing from, the CDM draws directly from our patients ACTUAL electronic medical record.
 - If your data isn't useful, reliable and high quality, your dashboard won't be either, CDM takes that concern away.

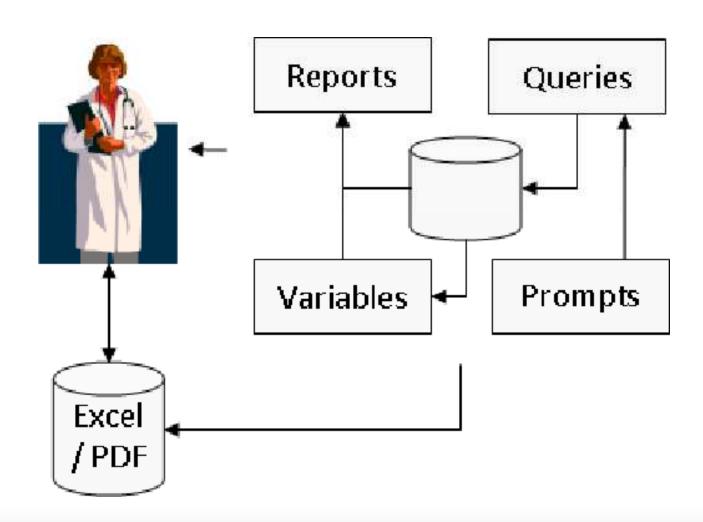
AHLTA Integrated Provider Tool



- Two ways to get CDM via AHLTA clinical desktop and freestanding application sign on.
- Benefits
 - Integrated Desktop Transparent data from patient level, command, regional and service level to be able to evaluate best practices and performance improvement real-time.
 - Joint solution for Joint patient care and evaluation of care in garrison.
 - Assess achievement of priorities across the enterprise

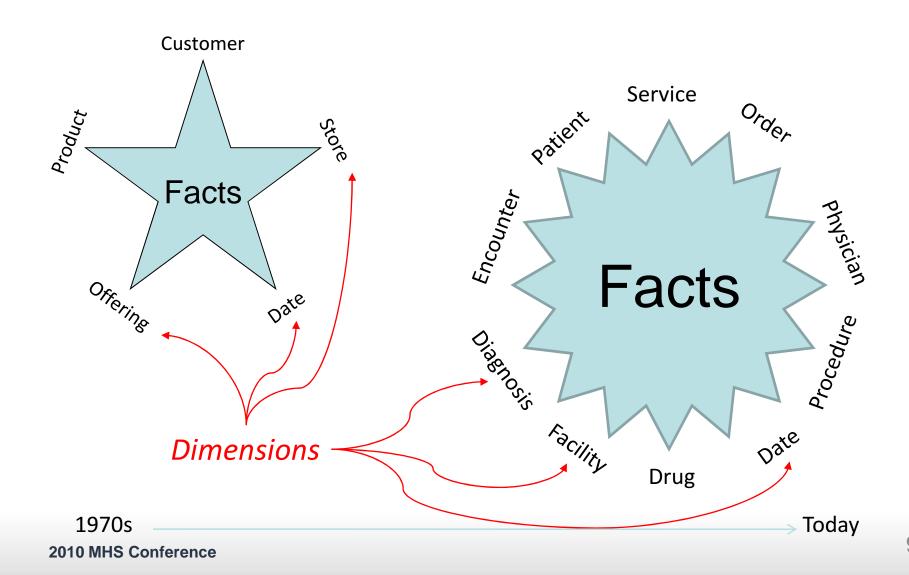
Conceptual Access Path

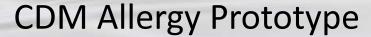




Star Schema Data Warehouses

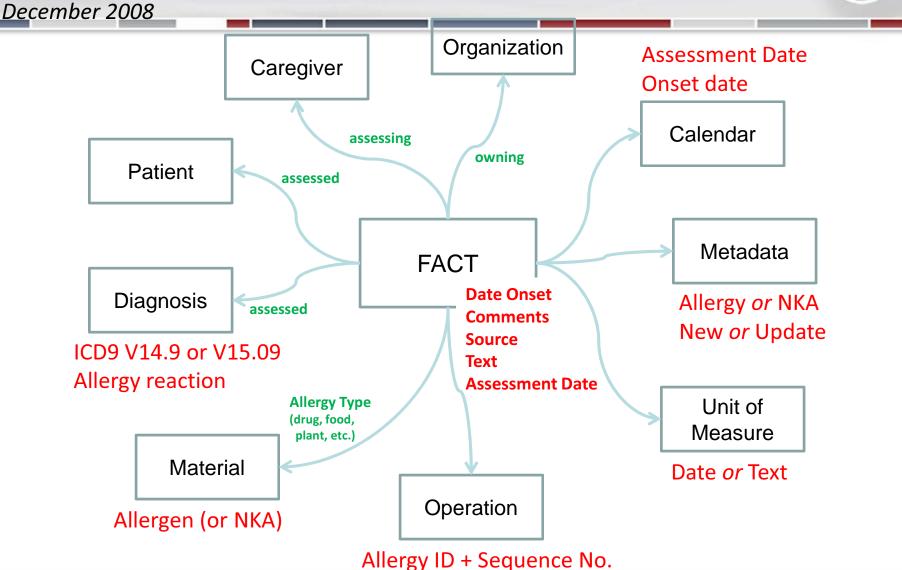






Department of Defense



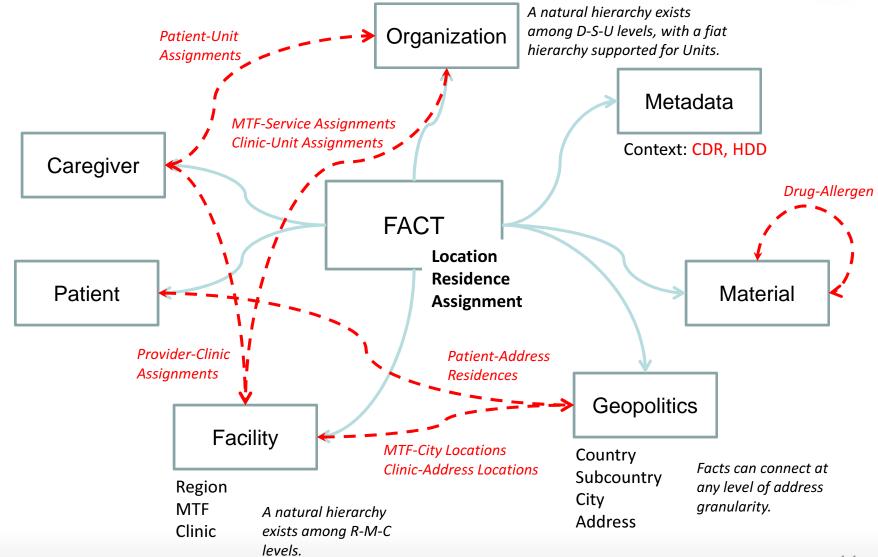


2010 MHS Conference

Interdimensional Control Data

Department Service Unit





Metadata Dimension





Metadata also drives the CDM Data Dictionary and internal system of controls.

CDM Data Fields

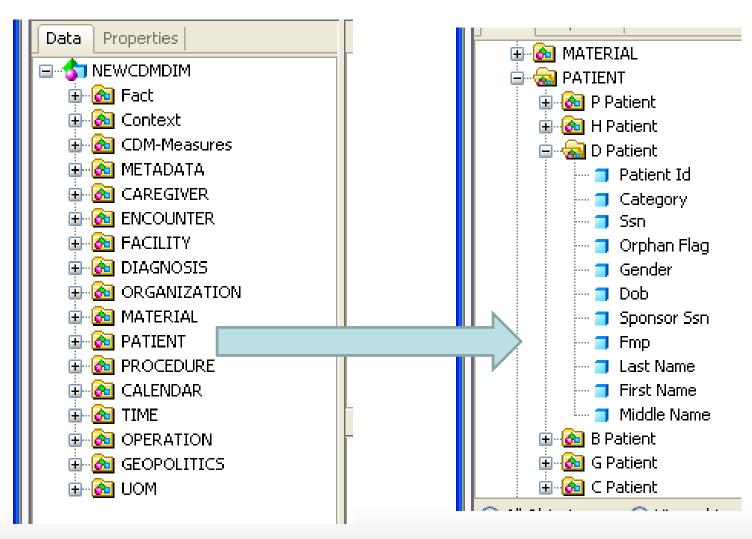


- Allergies
- Vital signs
- Health history
- Lab, radiology and pharmacy orders
- Body mass index
- Immunizations

- Consults
- Problem history
- Operational readiness
- Historical procedures
- Clinical coding
- Medcin terms

Universe is still evolving....





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System and limitations









- All CDR fields not funded to CDM
- All CDR fields not envisioned to CDM
- •CDM has new dev't funds
- •All fields in CDM do not have full date hx in CDR
- •This is not the big CDW.

CDM Capabilities



- Based on BO
 - Similar to M2
 - Easy query building: drag and drop objects
- Save and schedule queries for future data refresh
- Share reports with other CDM users
- Export reports to Excel, .csv or .pdf
- Display data using charts, bars and graphs

CDM Environment

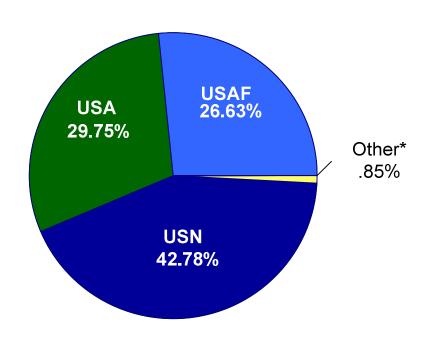


- Business Objects XI r2 (BOXI r2)
 - Infoview panel with added features
 - Web intelligence tool with added functionality
 - Five Universes
 - MTF Patient No Detail
 - MTF Patient Detail **
 - Enterprise Data Miner No Detail
 - Enterprise Data Miner **
 - Provider Patient
 - 17 Pre-configured reports

Total Users



Service	Number
Navy	185
Army	129
Air Force	116
Other*	4
	434



CDM Users Potential uses



ESC

- Encounters closed in 72 hours
- Co-signature delinquency
- Coding accuracy
- Prosp Pay't System (RVUs)
 - Provider comparison & Trending
- Clinic Mgrs
 - EOD Closure
 - CHCSI = AHLTA
 - Tests not executed
 - Med reconciliation report
 - Hedis-like measures

Providers

- CPG measures
- Enrolled panel population (pie) over view
- Nursing (RN/LP/HM)
 - Lab pull report
 - Tests not executed
 - Pt Recalls (lab/rad)
 - Med reconciliation report
- Business Users/Data Miner
 - Data Validation
 - Compliance Tracking
 - PBB/PPS
- Operational Reports

Who benefits from this tool?



- AHLTA users only, not for long. . .
 - -Providers
 - -Clinical support staff and administrators
 - -Population health experts
 - -Data analysts
 - -Researchers

Type of CDM access and data?



- MTF Patient Detail**: User can view patient identifiable data within a specified MTF.
- MTF Patient No Detail: User can view de-identified patient data for patients within a specified Military Treatment Facility (MTF).
- Enterprise Data Miner (EDM) Detail**: User can view identifiable patient data for all patients across the health enterprise.
- Enterprise Data Miner (EDM) No Detail: User can view de-identified patient data for patients across the health enterprise.
- Provider Detail**: User/Provider can view patient identifiable data for patients treated by that provider.
- ** This role requires user to complete, submit and have processed an **Account Access Request Form (AARF) through EIDS**.

Roles are assigned by MTF AHLTA system administrators.

Where can I get more info on CDM?



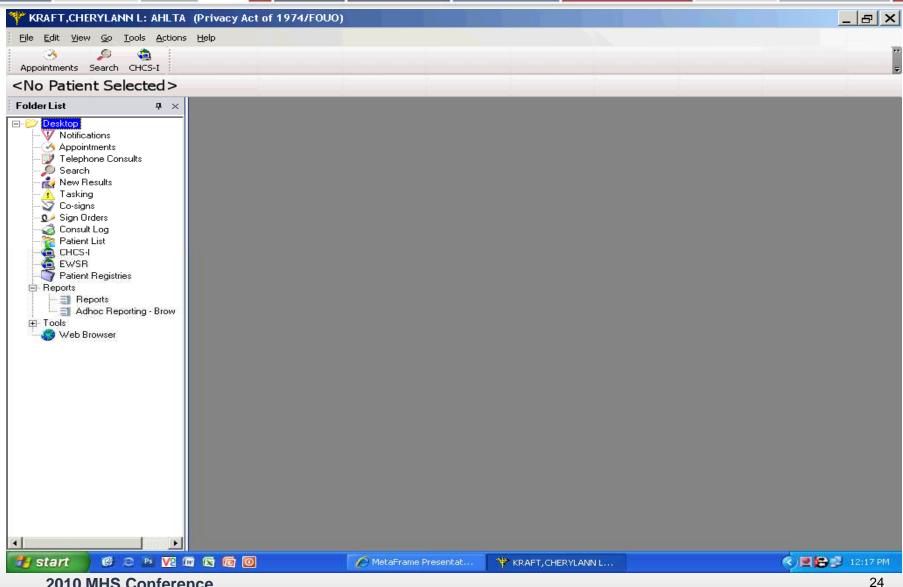
- CDM Public Training Folders
 - MHS CDM Business Objects Training Exercises
- MHS Online https://mhslearn.satx.disa.mil/
 - Scheduled Learning: BoxiBusiness Objects XI R2
- CDM Workshops
 - MHS Online Virtual Classroom
 - March 6 April 3, 2008: Thursdays at 2 p.m. EST



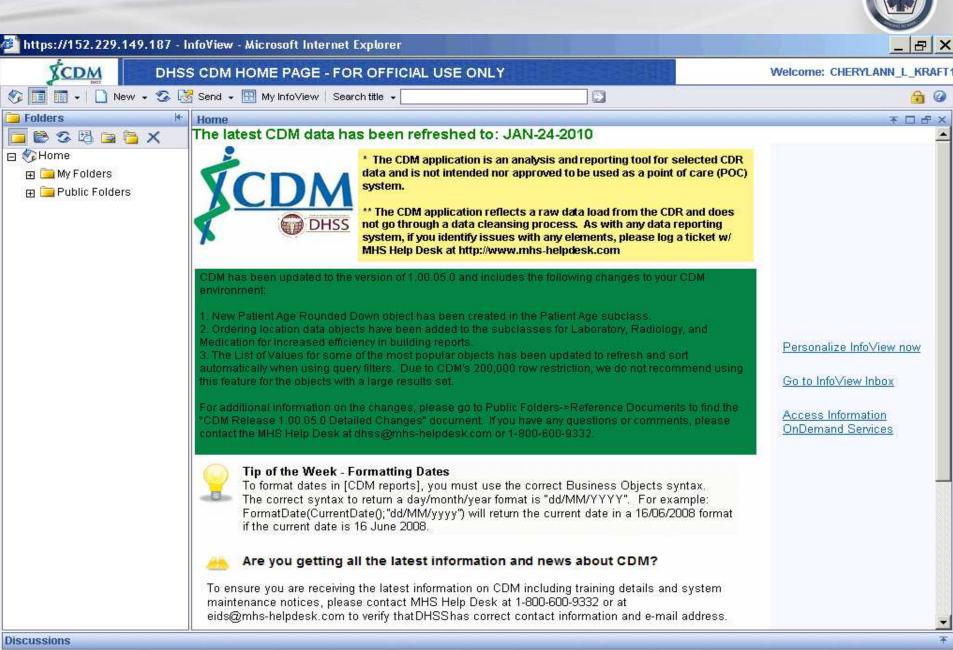
SAMPLE CDM REPORTS

How do you access CDM



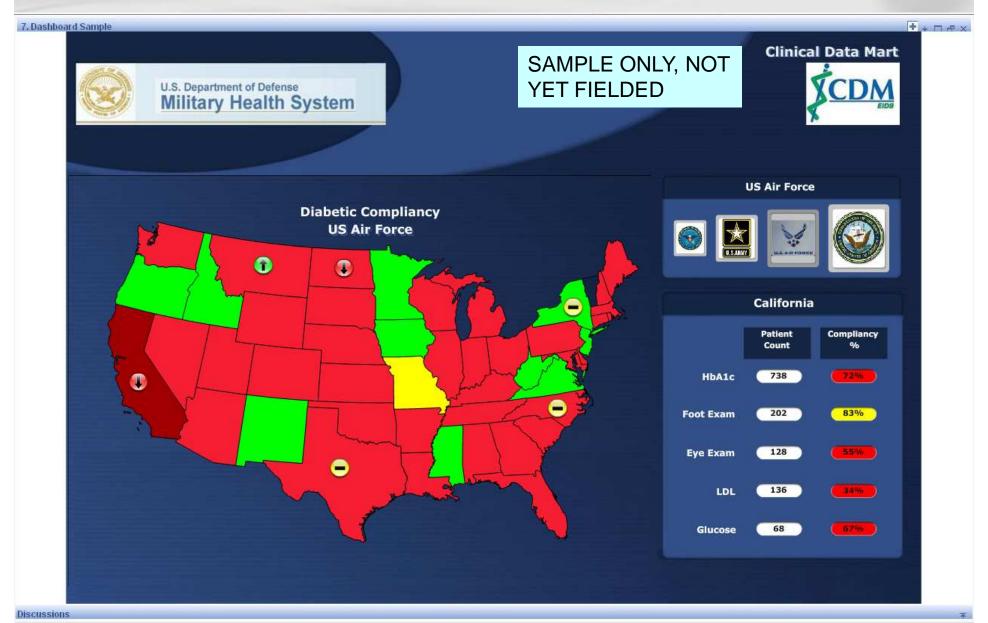






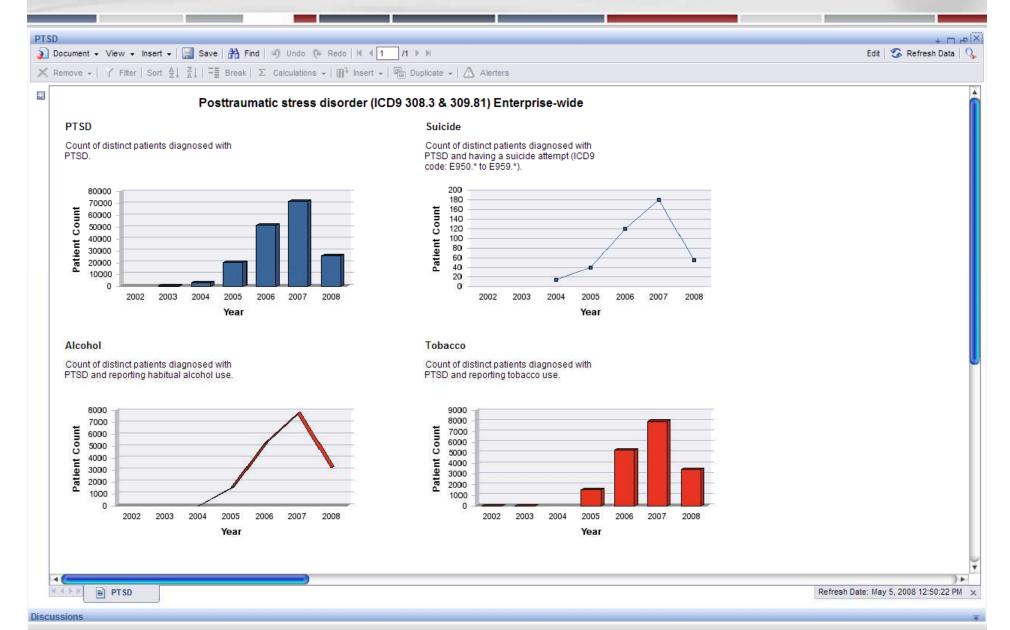
Sample CDM Dashboard





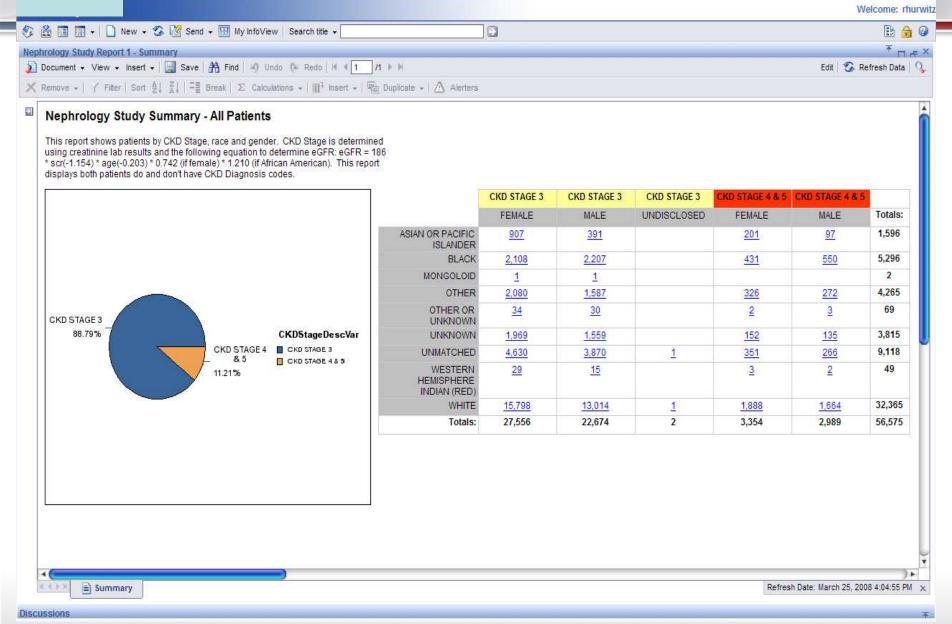
Enterprise PTSD





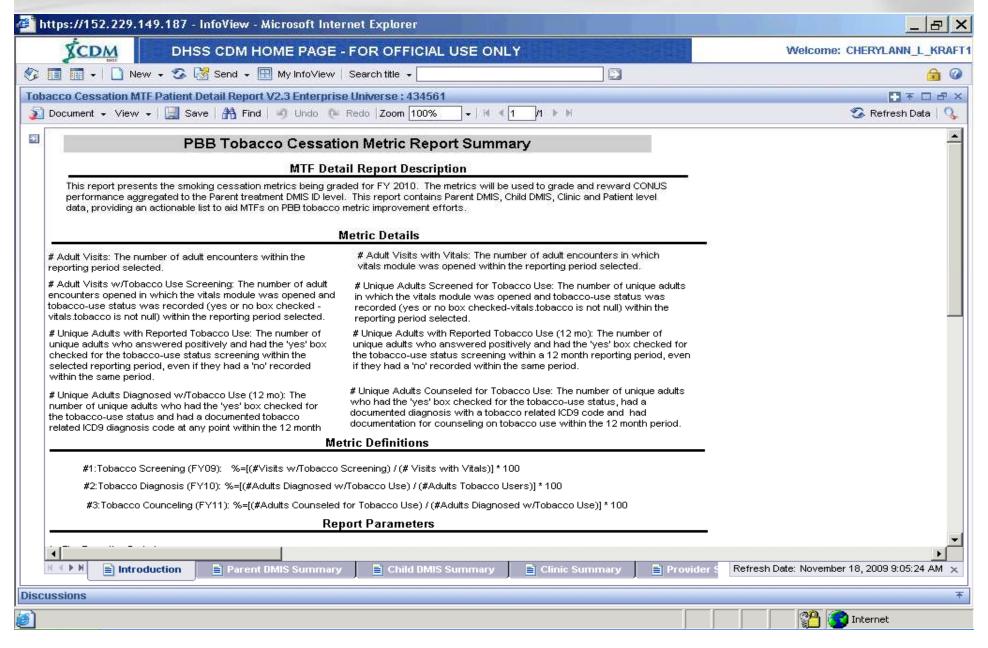
Nephrology Study – All Patients

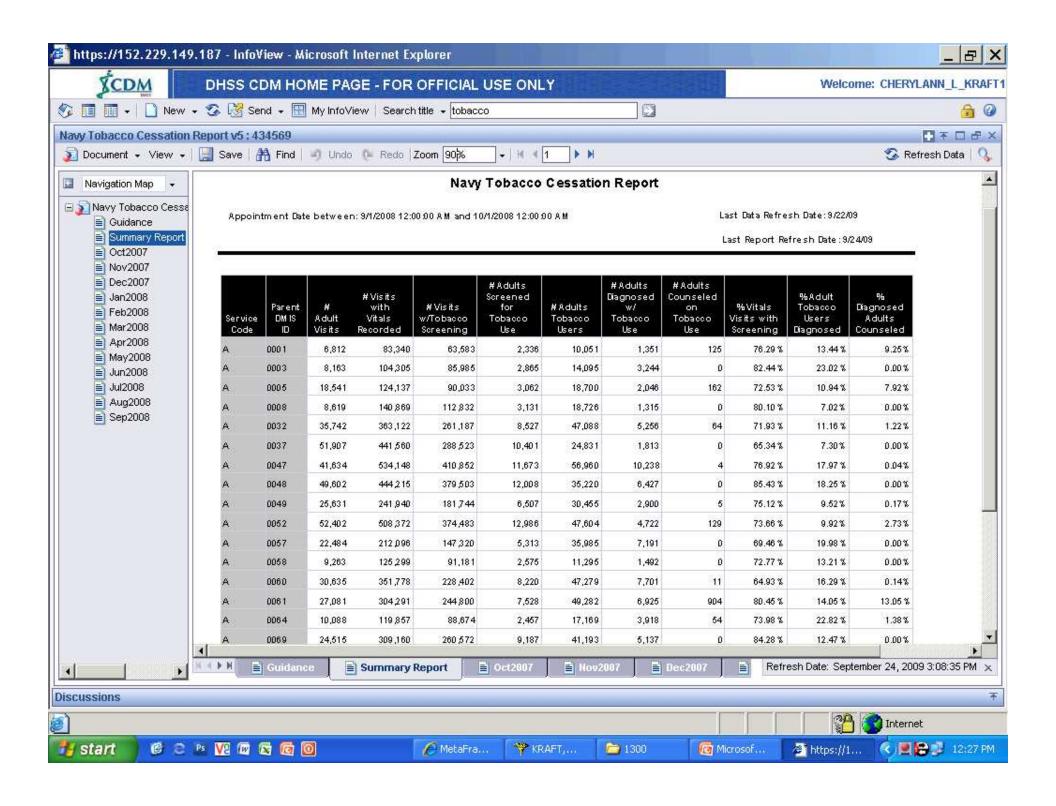


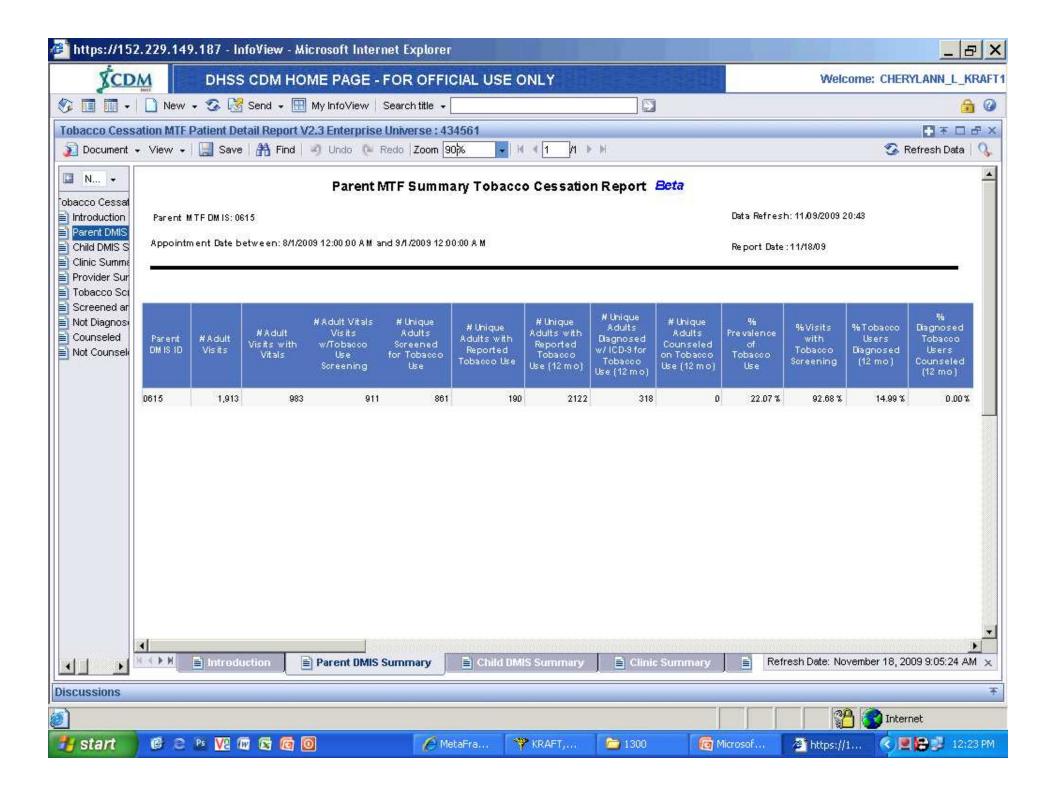


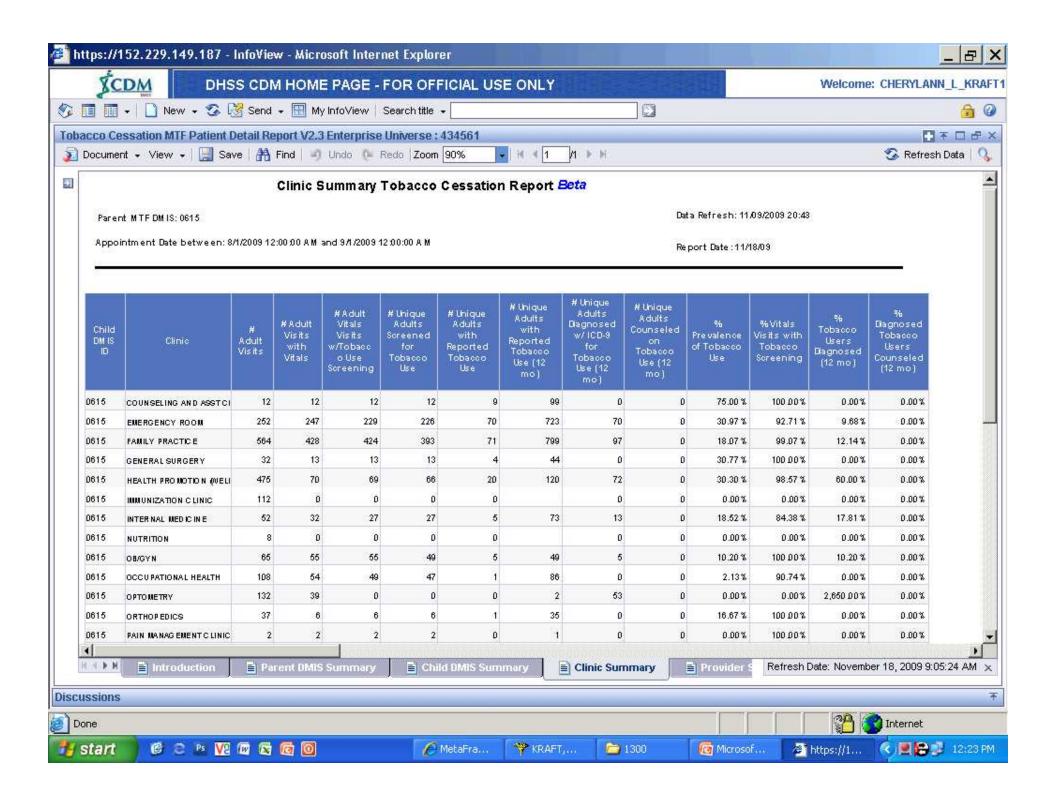
Tobacco Cessation PBB Metric

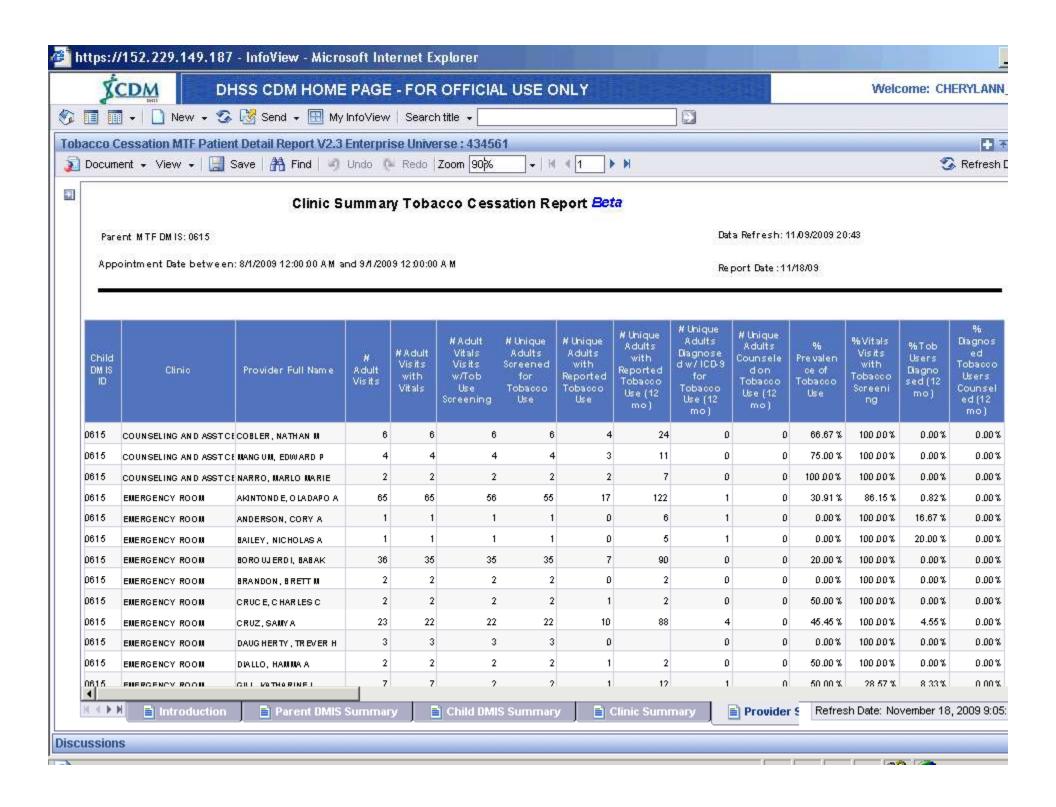






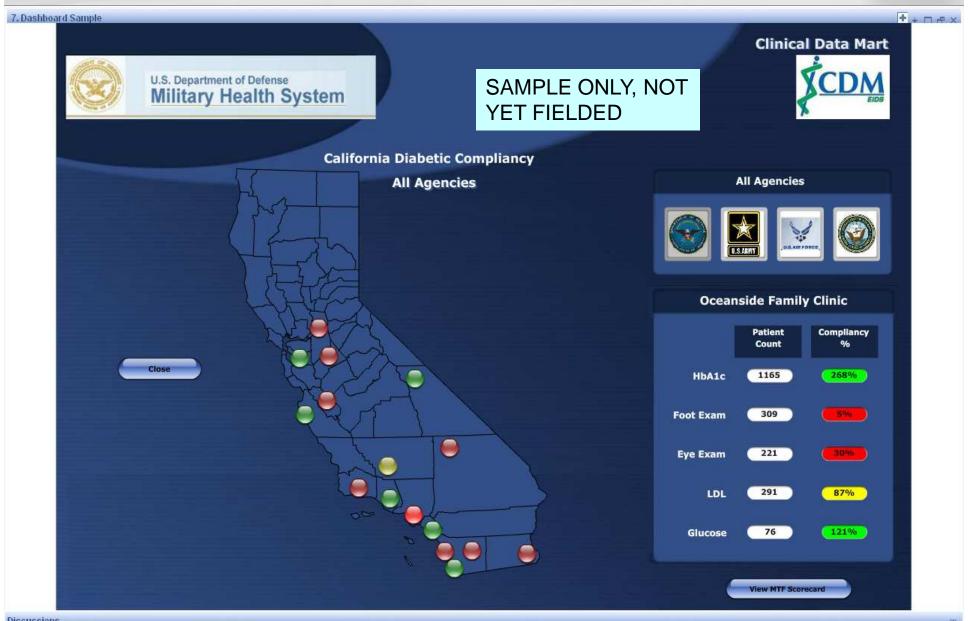






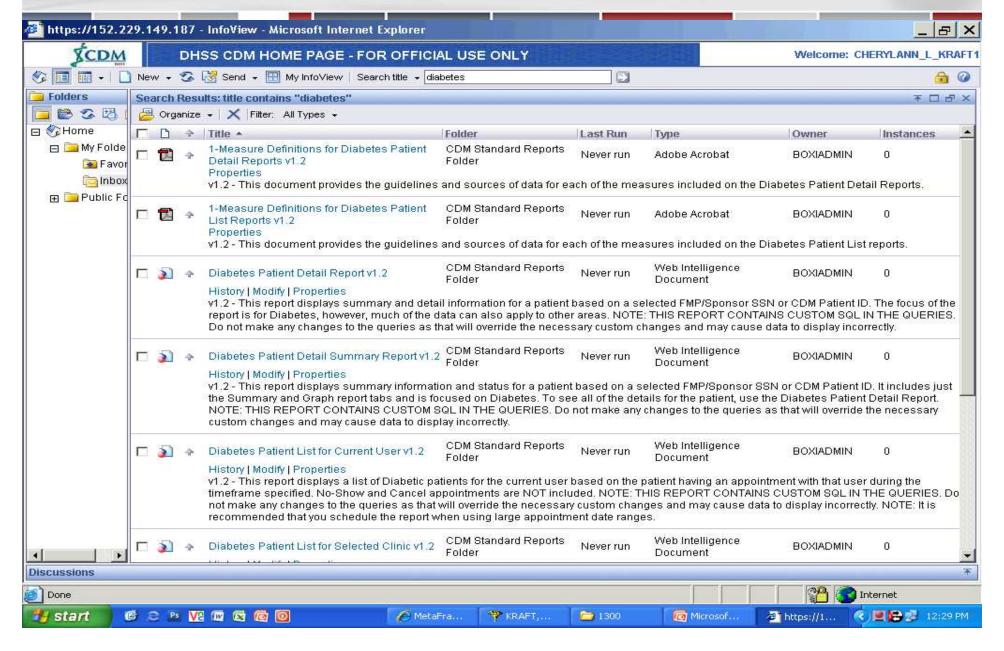
CDM Dashboard Drill Down





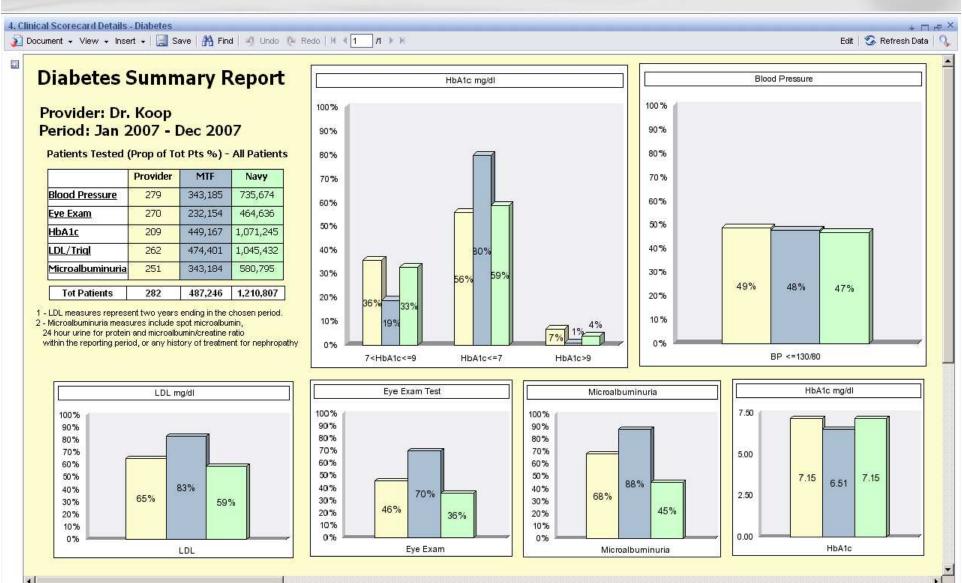
CDM Canned Diabetes Report





Diabetes Summary Report





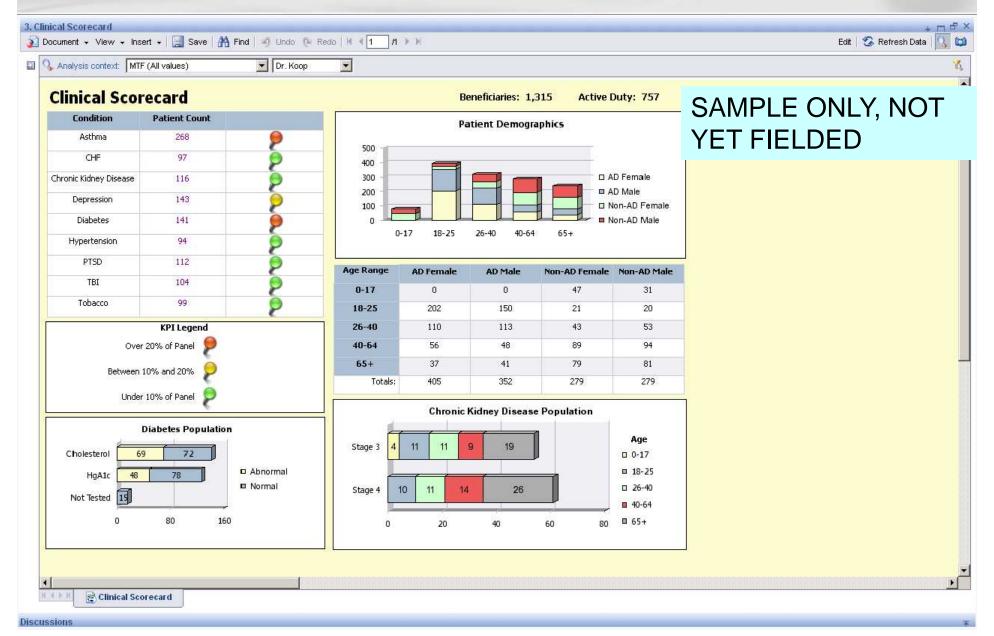
Discussions

Diabetes Summary Report



Clinical Scorecard





Corneal Refractive Surgery/ Follow-Up Report



5. Corneal Refractive Sugery & Follow-up Diagnosis

Document
View
Insert
Save | A Find | Undo Redo | M 1 | M |

Edit | Refresh Data | Q

Corneal Refractive Surgery & Follow-up Diagnosis

SMITH, ROBERT

Patient ID	Appointment Date	MTF Name	CPT4/ ICD9	Procedure/Diagnosis
PHI Data	2/23/06	Valley View Medical Center	S0810	PHOTOREFRACTIVE KERATECTOMY (PRK)
PHI Data	3/14/06	Bayside Critical Care Center		AFTERCARE FOLLOWING SURGERY OF SENSE ORGANS

JONES, ERIN

Patient ID	Appointment Date	MTF Name	CPT4/ ICD9	Procedure/Diagnosis
PHI Data	8/23/07	Valley View Medical Center	S0810	PHOTOREFRACTIVE KERATECTOMY (PRK)
PHI Data	8/24/07	Valley View Medical Center	S0810	PHOTOREFRACTIVE KERATECTOMY (PRK)
PHI Data	9/21/07	Bayside Critical Care Center		AFTERCARE FOLLOWING SURGERY OF SENSE ORGANS
PHI Data	11/13/07	Bayside Critical Care Center		AFTERCARE FOLLOWING SURGERY OF SENSE ORGANS

NORRIS, MICHAEL

Patient ID	Appointment Date	MTF Name	CPT4/ ICD9	Procedure/Diagnosis
PHI Data	11/29/07	Valley View Medical Center	S0810	PHOTOREFRACTIVE KERATECTOMY (PRK)

ALLEN, TYLER

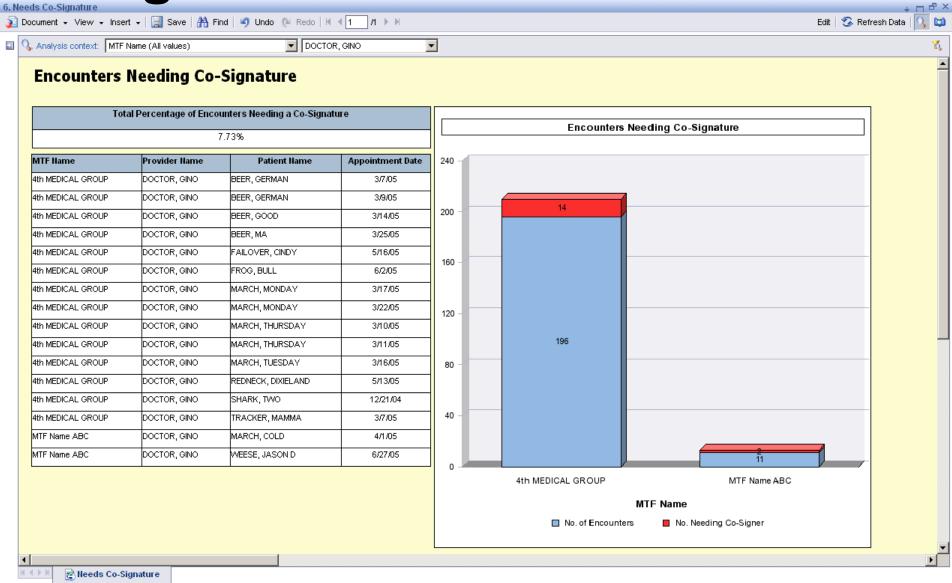
	Patient ID	Appointment Date	MTF Name	CPT4/ ICD9	Procedure/Diagnosis
	PHI Data	8/10/06	Valley View Medical Center	S0810	PHOTOREFRACTIVE KERATECTOMY (PRK)
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Corneal Refractive Surgery Report

Encounters Needing Co-Signature

Discussions





Appointment and Encounter Status



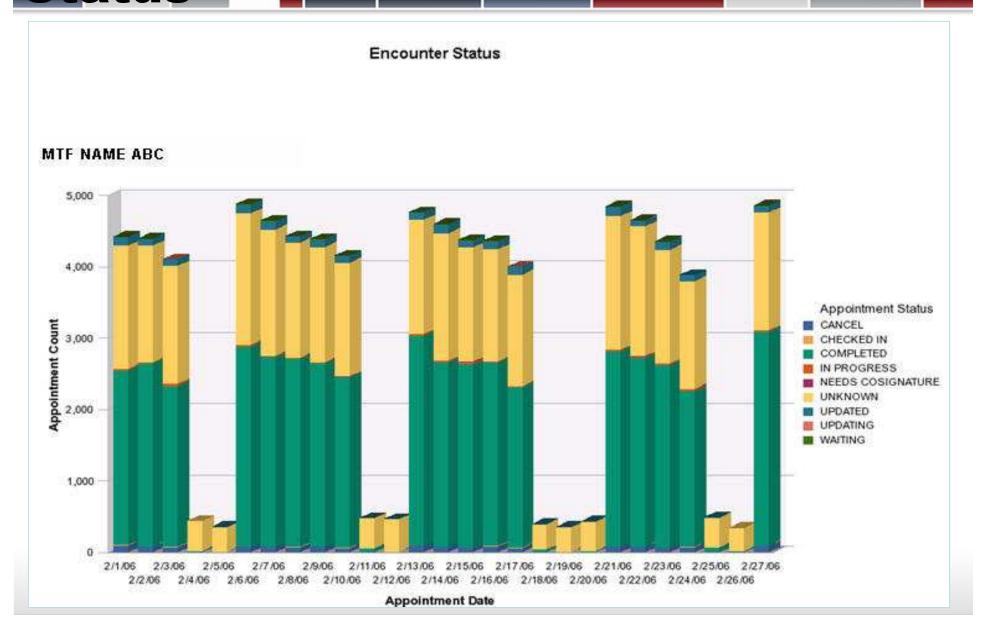
Encounter Status

MTF NAME ABC

		CHECKED IN	COMPLETED	IN PROGRESS	NEEDS COSIGNATURE		UNKNOWN	UPDATED	UPDATING	WAITING	Sum
2/1/06	95	7	2,446	25			1,724	121		2	4,420
2/2/06	79	6	2,561	18		1	1,636	92		4	4,397
2/3/06	61	19	2,252	28		2	1,652	91		1	4,106
2/4/86	- 1		15				420				436
2/5/06	- 1		4				346	1			352
2/6/06	75	3	2,808	22			1,843	124		3	4,878
2/7/06	83	2	2,651	18		2	1,770	109		11	4,646
2/8/06	67	11	2,630	16		6	1,611	84		4	4,429
2/9/06	74	- 1	2,569	17		3	1,616	103		1 5	4,389
2/10/06	56	5	2,391	9	Ī	2	1,595	98		2	4,158
2/11/06	2		57				415	5			479
2/12/06			8				454	1			463
2/13/06	87		2,950	20		1	1,599	102		1 2	4,762
2/14/86	78	2	2,583	21		1	1,786	127		1 2	4,601
2/15/06	69	2	2,564	25		8	1,602	96		1 10	4,377
2/16/06	79	12	2,574	11		1	1,572	108		8	4,365
2/17/06	56	16	2,242	16		2	1,561	106		1	4,000
2/18/06			39				355	1			395

Appointment and Encounter Status





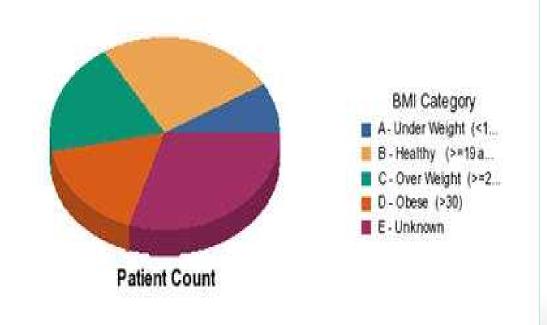
MTF Females' BMI distribution



Female Patient Totals by BMI Category

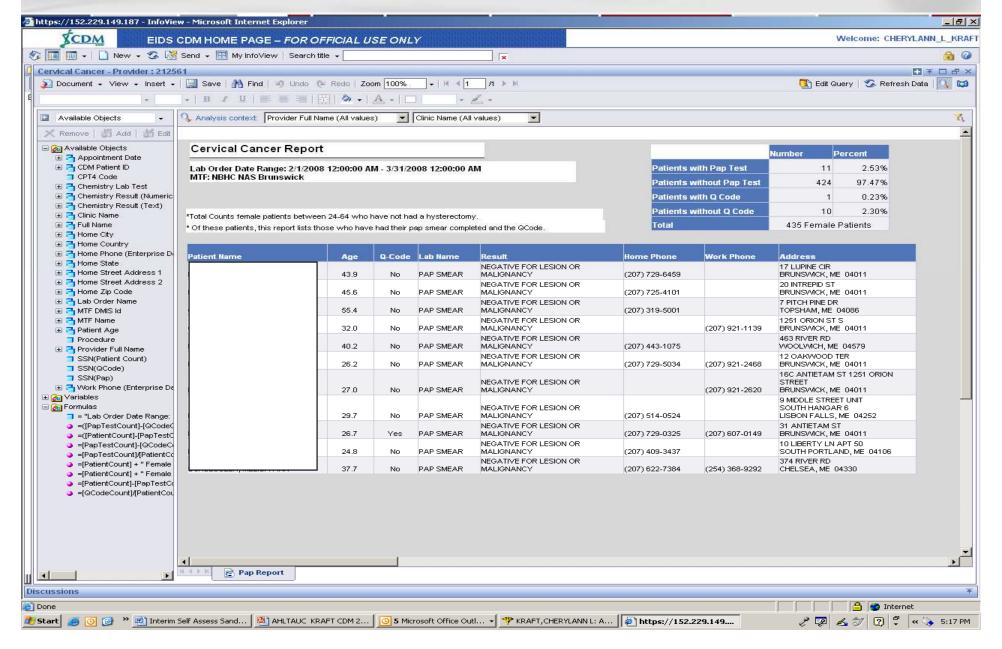
MTF NAME ABC

BMI Category	Patient Count
A - Under Weight (<19)	76
B - Healthy (>=19 and <25)	232
C - Over Weight (>=25 and <=30)	175
D - Obese (>30)	153
E - Unknown	272
Sum:	908
	Percentage:



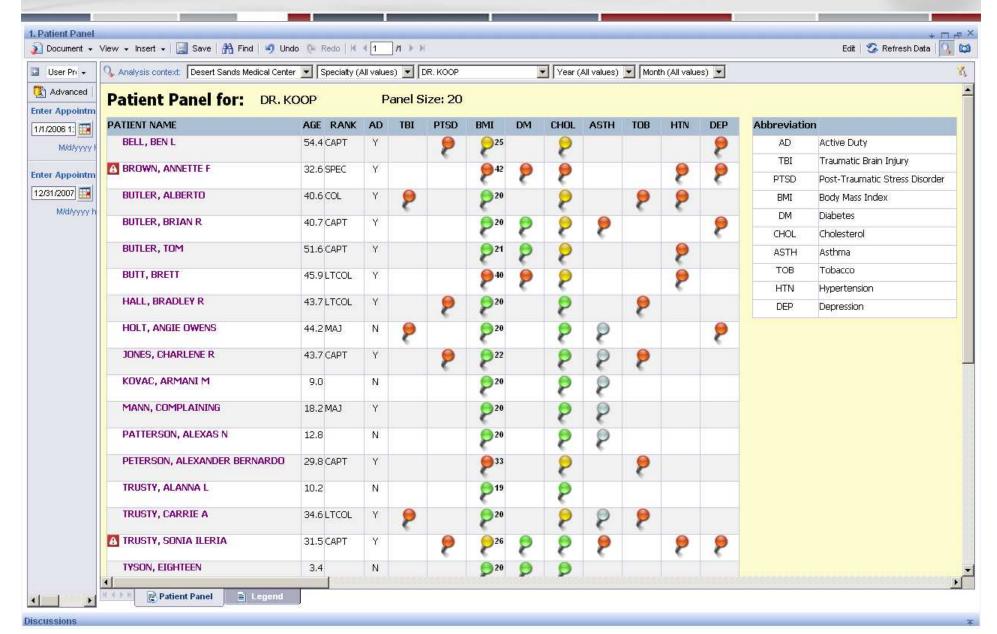
Clinic Pap Follow Up report





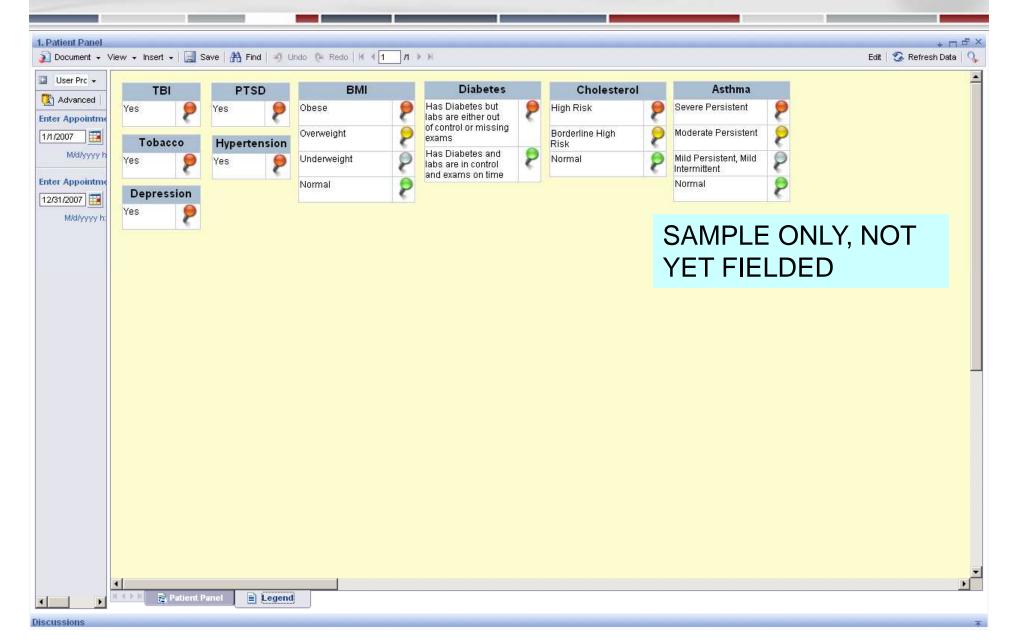
Patient Panel





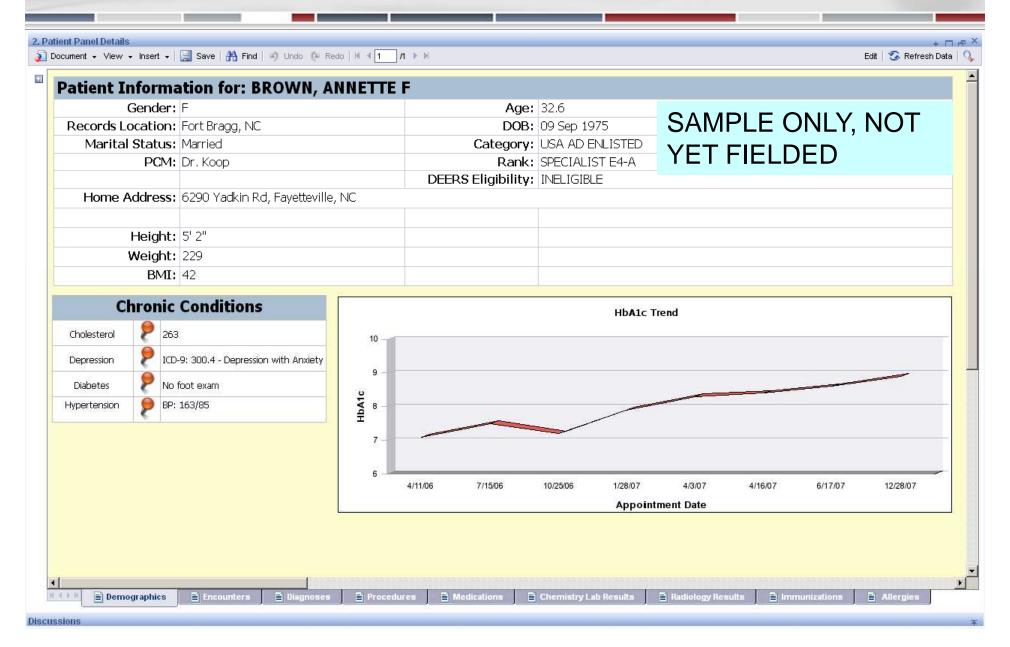
Patient Panel Legend





Patient Panel Detail



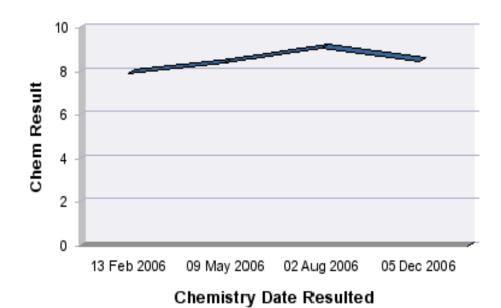


HEMOGLOBIN TREND



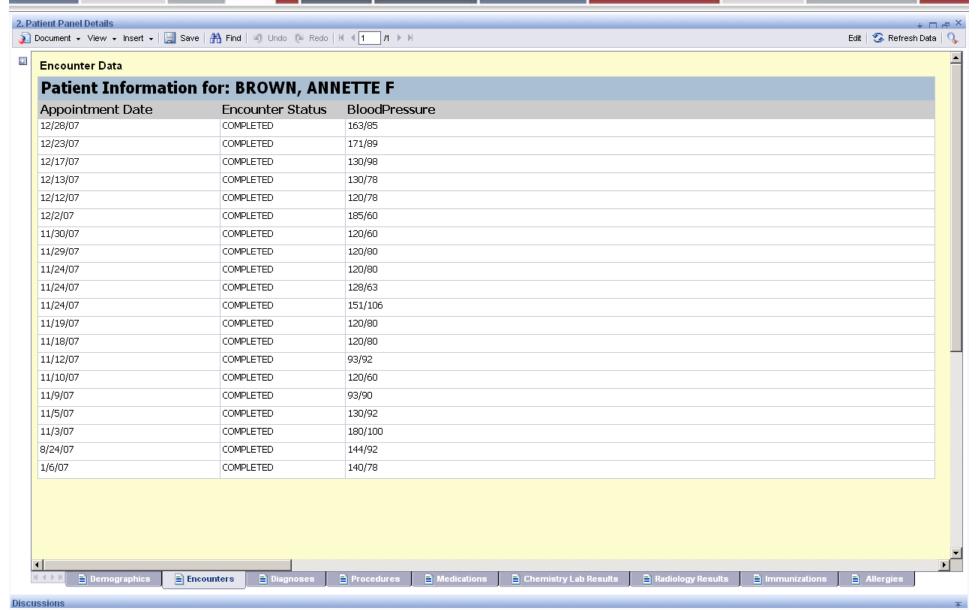
Patient SSN: 123456789

Full Name	Appointment Date	Chemistry Date Resulted	Chemistry Result (Numeric)	Chem Result	Chemistry Lab Test	MTF Name
	2/10/06	13 Feb 2006	7.9	7.9	HEMOGLOBIN A1C	Madigan AMC-Fort Lewis
	5/8/06	09 May 2006	8.4	8.4	HEMOGLOBIN A1C	Madigan AMC-Fort Lewis
	8/2/06	02 Aug 2006	9.1	9.1	HEMOGLOBIN A1C	Madigan AMC-Fort Lewis
	12/4/06	05 Dec 2006	8.5	8.5	HEMOGLOBIN A1C	Madigan AMC-Fort Lewis



Patient Panel Detail – Encounters





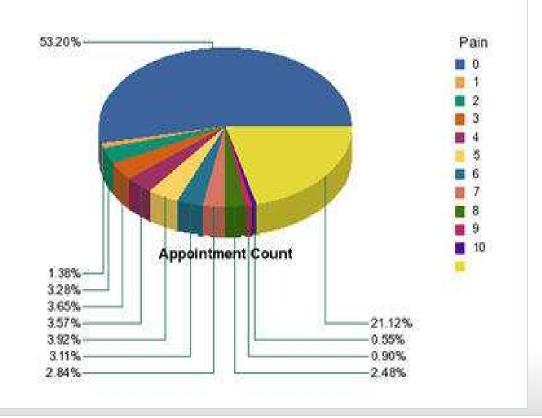


APPOINTMENT COUNT BY PAIN SCALE

Appointment Count by Pain Scale

MTF NAME ABC

Pain	Appointment Count	Percentage
00	14,932	53.20%
91	387	1.38%
02	921	3.28%
03	1,024	3,65%
04	1,003	3.57%
05	1,099	3.92%
06	872	3.11%
97	797	2.84%
08	697	2.48%
09	253	0.90%
10	154	0.55%
Undocumented	5,927	21.12%
Total	28,066	100.00%





Thank you

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 - Cherylann.kraft@med.navy.mil